

Art Unit: 1731

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art fails to disclose or reasonably suggest adding a $(\text{NH}_4)\text{SiF}_6$ to a premix solution containing deionized water and a dispersant wherein is later mixed with fused silica and steps c-e as recited in applicant's claim 1 are performed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References A-D and G are cited in PTO-892 to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is (703) 605-1174. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

C.L
March 8, 2003

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 6, "the defoaming step (e)" lacks antecedent basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhandarkar et al (US 6,442,977) in view of Bahr, Jr. et al (US 6, 223, 563). Bhandarkar discloses premixing germanium dioxide with tetramethylammonium hydroxide (TMAH) to form a TMAGe solution (Column 4, lines 18-32) and then adding deionized water (Column 8, lines 1-13). The premix was then mixed with fumed silica in a disperser (Example 1) to thus form a dispersed sol. The dispersed sol was then aged for 30 minutes, de-aired (Column 8, lines 21-22) and a gelating agent, methyl lactate or ethyl lactate, is eventually added (Column 5, lines 54ff). Bhandarkar is silent to adding a fluorine compound to the premix. However Bhandarkar does teach that it is possible to use other quaternary ammonium hydroxides in order to attain the TMAGe solution

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(Column 4, lines 27-31). As taught by Bahr, Jr. minor effect on pH and aiding in the formation of stable electrostatically-protected silica (Column 5, lines 14-44), would result if tetramethylammonium fluoride (TMAF) or the TMAF in the form of TMAH with HF or NH_4F is added to sol. Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to have provided TMAF as substitute to TMAH of Bhandarkar premix solution, which would result in attaining a TAMGe solution as required by Bhandarkar in order to take advantage of providing a stable electrostatically-protected silica when using TMAH with HF or NH_4F as taught Bahr.

Additionally, it would be expected that Bhandarkar's aging of the gel in a mold for 24 hours (Column 8 line 23) would be done in an ambient temperature as conventionally done in the art (See Column 3, line 43 of US 5,919,280), absent any indication of aging.

As for claims 2 and 4-5, the TMAF may be added in the form of TMAH with HF or NH_4F as recited above.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Allowable Subject Matter

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Office Action Summary

Application No.

09/750,510

Applicant(s)

OH ET AL.

Examiner

Carlos Lopez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-6 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____



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09/750,510	12/28/2000	Jeong-Hyun Oh	5000-1-185	6949

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EXAMINER

LOPEZ, CARLOS N

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DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.